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STATE OF MONTANA Department of Natural Resources and Conservation Conservation Districts Bureau Box 201601 Helena, MT 59620-1601	***For Department Use*** Received by _____ Date _____ Application No. _____ Budget Submitted _____

Conservation Education Mini-Grant Program Application

$500 Grants are available for projects in:

- Water Quality
- Riparian and Rangeland Ecology
- Aquatic Micro- and Macro - Flora and Fauna
- Soil and Water Conservation
- Wildlife
- Outdoor Classrooms
- Adult Education Events
- Climate/Environment Studies

Applications must include:

- Name of School or Group
- Name of Conservation District
- Description of project
- Time frame
- Itemized budget, including a required in-kind match

Please fill out application in its entirety.

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D.N.R.C.

1.	**Name of School District:**	Boulder District 1
2.	**School Contact Person:**	Mary T. Williams
3.	**Name of Conservation District**	Jefferson Valley
4.	**CD Contact Person:**	Kris Hugulet
5.	**Conservation District Supervisor signature:**	John Heide
6.	**Name of Project:**	Stream Table
7.	**Date of Project:**	Spring 2012 (~~March~~ April 2012) depends on weather
8.	**Amount Requested:**	$500
9.	**CD Address:**	P.O. Box 890 Whitehall, MT 59759
10.	**CD Phone Number:**	406-287-3215
11.	**CD Federal ID #:**	81-0330402
12.	**House District:**	77
13.	**Senate District:**	39

Application Outline

What environmental, conservation, or natural resource issue(s) will be addressed with the use of mini-grant funds?

The stream table will be used to teach 1)what a watershed is (definition)
2) how erosion and deposition occur along a stream
3) man-made causes of erosion
4) methods to decrease and prevent erosion

Watershed conservation will be the overall message the students should take from utilizing the stream table.

What activities are planned for the entire project?

The table will be used primarily in 2 ways.
1) As a visual aid when discussing watersheds, and studying stream ecology.
2) As a method of testing student or teacher generated hypotheses about watershed erosion.
For example: A students might suggest adding more trees along a stream bed to prevent erosion, and this scenario could be set up, or a teacher may ask- what affect does slope have?

What will the DNRC education mini-grant fund? Be specific.

The grant will fund the materials for building the stream table, and a cover for the stream table.

How many students will be involved?

In the construction process- 2 or 3; Once it is built, all students in 9th grade and the ecology classed will use the stream table (approximately 70 a year)

State the objectives, goals, and outcomes the project will accomplish.

We would like to construct a permanent stream table in the Jefferson HIgh School outdoor classroom. A stream table would add to our curriculum by providing a visual and hands-on tool when we learn about watersheds. We will be able to illustrate factors affecting stream eroision and deposition, as well as point and non-point source pollution. The students will be able to see the affcets of different factors affecting erosion and deposition, such as deforestation, slope, affect of agricultural practices on the stream (contour plowing, irrigation, overgrazing of surrounding land,

How will pre- and post-project student performance be evaluated?

Students will be given a pretest on watershed ecology prior to studying this unit. This assesment will aid the teacher in uncovering pre-conceived ideas about watersheds. After the unit, students will again be assesed on the content covered in the unit, and will also be assessed by providing a solution to one of 3 scenarios: overfertilization of a stream from agricultural run-off, increase the hunting and fishing value, mitigation of flood damage

What skills and abilities will to be developed, and what knowledge is to be gained from the project activities?

Students will develop increase awareness of the factors which can affect a healthy stream. They will become aware of and understand the affects of erosion and deposition on streams; they will become aware of how man affects a stream's ecology by agricultural and resource extraction processes (timber and mining). Students will also be expected to generate and test ideas on how to increase the stream's health and mitigate or eliminate any negative affects on the stream.

What will you consider a minimal and acceptable level of performance?

If students are able to convey through labs, tests, or projects an undertsanding of at least 3 ways to alter erosion and deposition patterns of a stream.

Proposed Budget for Stream Table

Jefferson High School

Boulder, MT

35.00	1	4' x 8' 5/8" exterior plywood
21.00	3	8' x 2" x 6" pine boards (untreated) These boards must be sound – any loose knots or cracks will allow leaks when the box is in use.
14.00	1 each	PVC cleaning compound and PVC sealant
School	1	100 foot outdoor use electric extension cord (optional)
16.00	1	15' length of 1 1/2" PVC pipe
School	1	3 gallon heavy duty bucket for filter bucket
80.00	1	3/10 HP electric sump pump
160.00	4	Automotive jack stands. Two of these should be the notched type, which allow fine adjustment of box slope.
25.00	1 gallon	Polyurethane paint (boat paint would be best)
donated	1 cartridge	Clear silicone sealant
School	1	Outdoor use multiple outlet power strip with on/off switch.
100.00	1	weatherproof vinyl cover
50.00		Miscellaneous pipe fittings and construction materials

The in-kind Match contribution will be met in labor costs for the project by students, teacher and X-L Industries, in Helena. X-L has also agreed to provide incidental costs for construction materials up to 100.for items not budgeted above.

Budget

Item	Mini-Grant Funding Amount	Other $	Other $	Other $	In-Kind
plywood					
4 8x2x6 boards					
15' PVC pipe and c					
PVC sealant, clean					
1 3/10HP sump pu					
garden hose					
drain plugs					
pipe straps					
How will the in-kind Match contribution be met? (In-kind can include the time spent in developing the project curriculum, matching school district funds, transportation, etc.--may be on separate budget sheet)					

See attached Budget

Project Continuation

What opportunities exist for project continuation or expansion?

The stream table will be apart of our outdoor classroom and so would add to the utility of this classroom on a yearly basis. I could also forsee adding a geology component- where the stream bed could be made of different types of rocks, and students could see how this geology affects the water chemistry.

In addition, since we would be dealing with a large number of students, I could see adding smaller versions to the stream bed for conducting labs (have enough tables for groups of 2-3 students)

~~Lastly, the table could be used for independent study projects where students would use the stream table to model scenarios they want to study and perform students generated investigations.~~

For example, If a student was concerned about acid mine drainage and decided to do a investigation on how to reduce the acidity, they could set up the stream table to model the conditions and test their ideas on this.

Mary T Williams

Approved Grants

A grant agreement will be written between the Department of Natural Resources and Conservation and the local conservation district, which will administer the funds. **Charges to the grant are not allowed until a contract is signed.** Grant payments are paid upon receipt of proper documentation of approved expenses (invoices, receipts, vendor invoice and final report). The final report should include pictures of the event and must be received prior to grant funds being released.

To locate the conservation district that is nearest your program view a map and directory at:
http://dnrc.mt.gov/cardd/consdist/CDdirectoryBinder.pdf

For additional information, contact: Linda Brander

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